

4.3 Congruent triangles

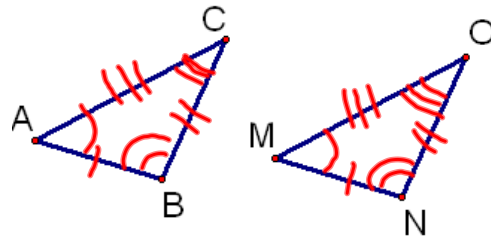
11/30
Quiz Tues 12/8

Congruent Triangles—same size

$$\triangle ABC \cong \triangle MNO$$

$$\begin{aligned}\angle A &\cong \angle M \\ \angle B &\cong \angle N \\ \angle C &\cong \angle O\end{aligned}$$

$$\begin{aligned}\overline{AB} &\cong \overline{MN} \\ \overline{BC} &\cong \overline{NO} \\ \overline{AC} &\cong \overline{MO}\end{aligned}$$

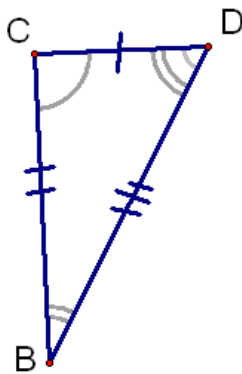


The corresponding parts of congruent triangles are congruent.

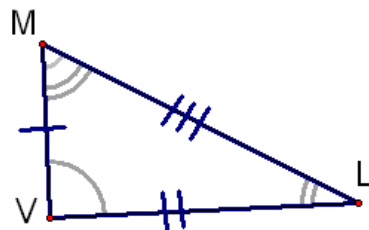
CPCTC

Nov 16-7:07 AM

What triangles are congruent?



$$\triangle CDB \cong \triangle VML$$



Nov 30-8:07 AM

If $\triangle THE \cong \triangle SAW$, what parts are congruent?

$$\angle T \cong \angle S$$

$$\overline{TH} \cong \overline{SA}$$

$$\angle H \cong \angle A$$

$$\overline{HE} \cong \overline{AW}$$

$$\angle E \cong \angle W$$

$$\overline{TE} \cong \overline{SW}$$

Nov 30-8:17 AM

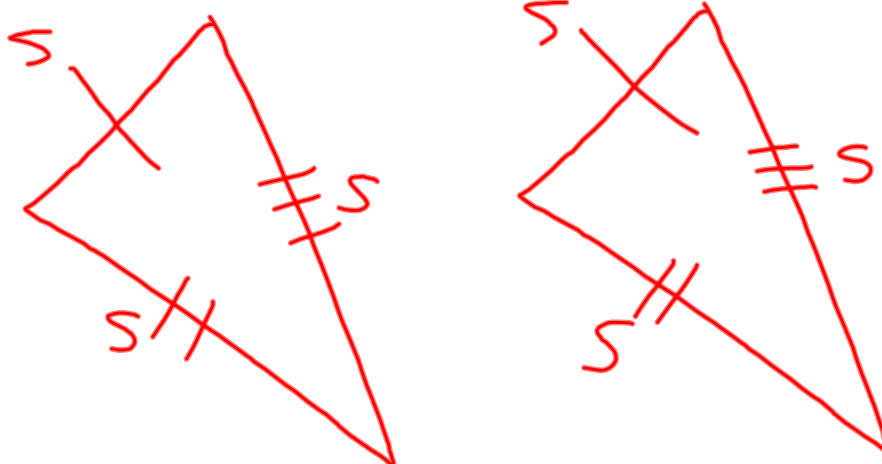
Reflexive $\triangle ABC \cong \triangle ABC$
 Symmetric If $\triangle ABC \cong \triangle MNO$, then $\triangle MNO \cong \triangle ABC$
 Transitive If $\triangle ABC \cong \triangle MNO$ and $\triangle MNO \cong \triangle XYZ$, then

$$\triangle ABC \cong \triangle XYZ$$

Nov 16-7:08 AM

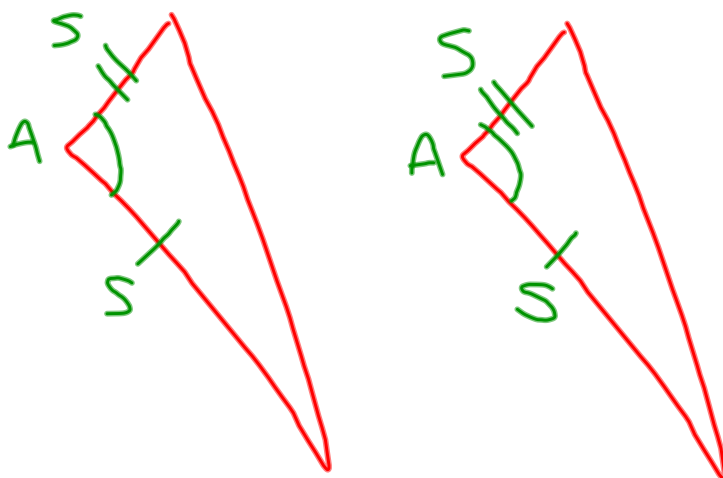
4.4 SSS and SAS

Postulate 4.1--Side-Side-Side(SSS)-If 3 sides of one \triangle are congruent to 3 sides of another \triangle then the \triangle s are congruent.



Nov 16-7:09 AM

Postulate 4.2--Side-Angle-Side(SAS)-If 2 sides and the included angle of one \triangle are congruent to 2 sides and the included angle of another \triangle then the \triangle s are congruent.



Nov 16-7:10 AM

Things to keep in mind for these proofs:

Reflexive

Vertical angles are congruent

Def. of midpoint

Def. of angle bisector and segment bisector

Parallel line facts

and anything else we have learned

Nov 30-9:12 AM

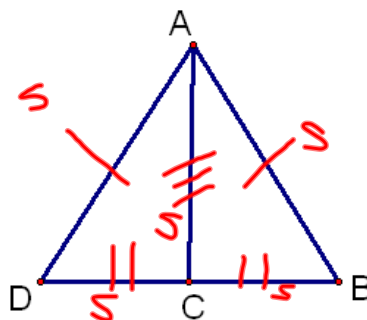
Given: C is the midpoint of \overline{DB}
 $\overline{AD} \cong \overline{AB}$

Prove: $\triangle ADC \cong \triangle ABC$

S.

- ①
- ② $\overline{DC} \cong \overline{CB}$
- ③ $\overline{AC} \cong \overline{AC}$
- ④ $\triangle ADC \cong \triangle ABC$

R.

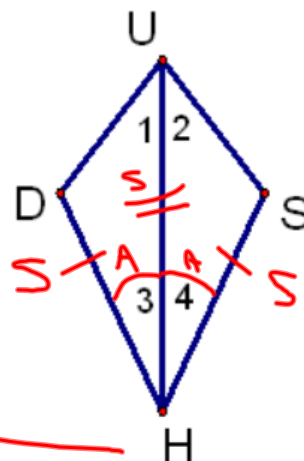


- ① Given
- ② def of midpt
- ③ Reflexive
- ④ SSS

Nov 16-7:11 AM

Given: \overline{HU} bisects $\angle DHS$
 $\overline{HD} \cong \overline{HS}$

Prove: $\triangle UDH \cong \triangle USH$



S.	R.
①	① Given
② $\angle 3 \cong \angle 4$	② def of \angle Bis.
③ $\overline{UH} \cong \overline{UH}$	③ Reflexive
④ $\triangle UDH \cong \triangle USH$	④ SAS

Nov 30-9:14 AM

HW

P 195 #s 9-14

p. 203-205 5-8(2 column), 10, 16, 22-25

Nov 16-7:16 AM